

THE PLOTTER

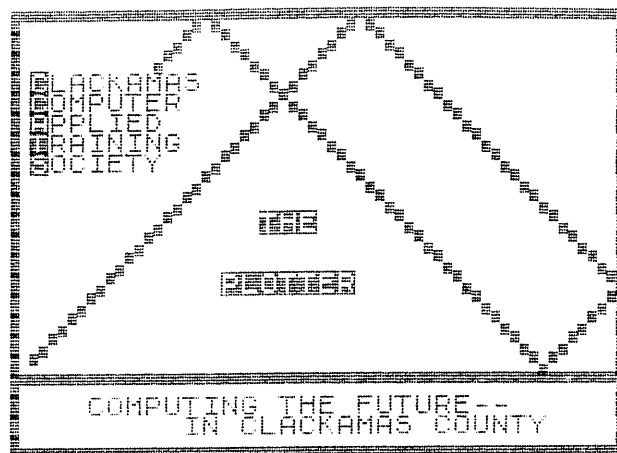
CLACKAMAS COMPUTER APPLIED
TRAINING SOCIETY
NEWS LETTER

VOLUME 11

**

NUMBER 9

SEPTEMBER 1993



FROM THE EDITOR'S DESK

Again the editor scrapes the bottom of the barrel . Not enough material to fill the issue this time. Besides that, the old gray cells are not perking very well at this time. Come on CCATS, you must have had a good program you can review, or generate a program in BASIC or SUPERBASIC or GWBASIC or C BASIC or ? What about your opinion of the manual that was provided for your MSDOS computer, or your printer. If they are a problem for you let our readers across this broad land know about it. Have you purchased a program that has a built-in manual that let you down? Let us know about it. Remember, all reviews do not have to be sweet but can include the bad. Contrary to many magazine reviews, all equipment is not the best.

~~This issue has a duplicate program for the 2068 and GWBASIC, mainly to illustrate the programming differences. This program generates a simple circuit, called a Zener circuit, that takes a DC voltage input that is too high and fluctuates with the load, and locks the DC output at a stable lower~~

>> >>

MEETING

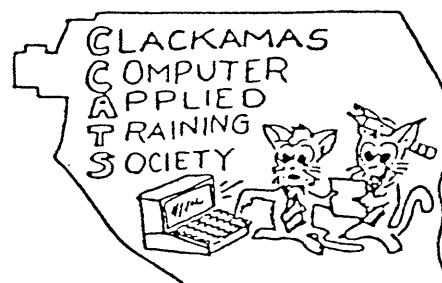
The SEPTEMBER meeting will be:

on: SUN., SEPTEMBER 19 1993

MEETING open at: 1:00 P.M.
in: COMMUNITY ROOM
FAR WEST FEDERAL BANK
OREGON CITY SHOPPING CENTER

WHAT YOU WILL FIND IN THIS ISSUE:

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voltage. This circuit uses a Zener diode of selected value to do the voltage controlling. This requires the user to obtain a Zener diode of the required output. The biggest difference in the programming is in the screen drawing programs. I realize that there are probably only one or two members in the CCATS who might be interested in this, but maybe someone "out there" who reads our newsletters may find this to be a useful circuit.

Readers will note my frustration with the printer manual that was provided for the EPSON ESC/P2 printer, the LQ-570. If any of our readers have this printer and want help in programming where the manual leaves off please drop me a line in care of our mailing address and I will see what I can do for you. I am no whiz but I can provide information from the reference manual I purchased from EPSON. The manual carries that all inclusive statement "No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording, or otherwise, without permission of Seiko Epson Corporation." Now just tell me how a user can use any of the information in a computer without violating this statement? I have books that carry the same message and these books include programs for the user to use. Crazy!

BITS & BYTES

by: Rod Gowen

This column, which used to be a monthly part of THE PLOTTER, now gets written only when there seems to be activity to write about either in our group or in the computing community that we are in touch with. If you have something that may be of interest to our readers, please feel free to submit it for publication.

TREASURY NOTES---

The club's savings account has been through several bank name changes over the past 12 years, but now we are faced with an actual change in banks. We started out with Fred Meyer Savings and Loan which changed hands to Willamette Savings and Loan, then on to at least one more before it became Pacific First Savings and Loan. Now, Pacific First S & L is Washington Mutual and they do not have a "small depositor's" type account. It seems that, unless we keep at least \$500 in our account, we will have to pay the \$1.50 per month fee. As club treasurer I found this too much to swallow and so have transferred our club account to West One Bank where they have only a \$100 minimum AND they will even waive that for non-profit groups! If there is any problem with this among our local members, feel free to call or bring it up at the September meeting.

GET WELL, JACK!---

Jack Armstrong, a long-time member of CCATS, underwent triple by-pass heart surgery on the 16th of August. I spoke to him on the 21st at home recuperating. It will be a long road back and our thoughts will definitely be with him. He says he will have quite a bit of time to work at his computer for a while. If you like, give him a call and wish him well.

THE BEST OF THE PLOTTER--

plods on. We are doing the best we can with what we have and are doggedly determined to finish this project even if no one out there is still around to appreciate it! The major portions of the text are in place and now it is a matter of numbering the pages, creating a

table of contents and an index and getting it printed (photocopied) so that there will be a "book"! Do not lose faith if you have been awaiting the project's completion. It will happen! Just a bit later than planned!

LIBRARY NOTES----

The bulk of the CCATS library--which includes books, magazines, newsletters and software--now resides with Bill Dunlop. There are some boxes still to be given to him, but he has over half of it at this time. He has been working on updating the library database files and tells us that he is catching up slowly. We hope to be able to offer a listing of what is in our library to any interested parties. At the moment, the information is in ProFile +5 files, but our hope is to port it out to word processor files and also across to the PC. At present, if you are a user of ProFile +5, we can supply a set of files on Larken disk or even cassette. We can, of course, also supply a printed copy. For more information, write or call.

MEETING NOTES----

As you know, we cancelled the meeting in August due to lack of attendance. We will meet again on the 19th of September. We hope to be able to get a bit more work done on the book. It will be nice when the project is finished, we would like to get back to a normal meeting format in which we can bring "show 'n' tell" and share information on software and hardware with our other members. I have a growing library of video tapes on computer related topics that the group is free to view at meetings. If any of our local members have any ideas for meeting topics, we would like to hear about them.

That's if for now!
See you next time.

ROUNDING NUMBERS

Dick F. Wagner

This handy program incorporates several features, tabulating numbers to a desired number of places to the right of the decimal point, and tabulating so the decimal point is in a fixed column to make a nice looking display.

A few comments about the program--in place of the usual method of calculating the rounding ($\text{INT}(v*100+.5)/100$) for 2 places, lines 220 and 230 make the number of places variable so the user can input the desired number. Lines 330 and 350 display in the first column the number to be rounded while the second column displays the rounded numbers in justified form.

In operation the second column starts the TAB from a fixed point minus the length of the number, this makes it right justify. In order to use LEN N\$, the calculated rounded number is converted to a string in line 300 so the length of the number can be used for Tab.

If a variable number of decimal places is required as an input, just change the GO TO in lines 330 and 350 to 200.

If a hard copy of the numbers is desired change the PRINTs in lines 330 and 350 to LPRINTs, or use COPY after the table is completed. Column headings can be added if desired.

This is a program useable on a 2068, TS 1000, or other BASIC language. If other than Sinclair some changes will probably be required.

```
10 PRINT " *****
**"
20 PRINT " *ROUNDING NUMBER
S*"
30 PRINT " *****
**"
40 REM DICK WAGNER 7/93
100 REM N=NUMBER TO BE ROUNDED
110 REM DP=DIGITS TO THE RIGHT
OF DECIMAL POINT
120 REM R=VALUE ROUNDED
200 PRINT ";HOW MANY PLACES TO
RIGHT OF DECIMAL POINT FOR R
OUNDING? ";: INPUT DP: CLS
205 PRINT "INPUT NUMBER TO BE R
OUNDED": PRINT
210 INPUT N;
220 LET A=N+5.5*10^-(DP+1)
230 LET R=INT (A*10^DP)/10^DP
300 LET N$=STR$ R
310 FOR L=1 TO LEN N$
```

```

320 IF N$(L)=". " THEN GO TO 350
325 NEXT L
330 PRINT N;: PRINT TAB (20-LEN
N$);N$: GO TO 210
350 PRINT N;: PRINT TAB (21-L);
N$: GO TO 210

```

INPUT NUMBER TO BE ROUNDED

.009999	.01
0.9945	0.995
10.0009	10.001
900012	900012
55.34555	55.346

ZENER VOLTAGE REGULATION

Dick F. Wagner

A zener diode can be used for DC voltage regulation. The process takes a higher voltage and reduces it to a desired voltage of reasonable voltage fluctuation. This is not to be confused with a filtering power supply but this circuit may be used in a filtering power supply.

The diagram shows a DC INPUT voltage, a load resistor, the Zener diode, ground connection, and the DC voltage output. A very simple circuit for what it does.

The resistor R must have sufficient wattage value to work in the circuit. It is calculated by the current flow, and the voltage drop thru it.

The Zener diode must also have sufficient wattage rating, and a voltage rating that determines the output voltage. The program calculates the Zener watts rating.

```

5 PRINT AT 6,0;"ZENER DIODE V
OLTAGE REGULATOR"

```

```

10 PLOT 44,80: DRAW 30,0
13 REM DRAW RESISTOR
15 LET x=2
20 LET y=8
40 DRAW x/2,y/2
50 DRAW x,-y
60 DRAW x,y

```

```

70 DRAW x,-y
80 DRAW x,y
90 DRAW x,-y
100 DRAW x,y
110 DRAW x/2,-y/2
120 DRAW 54,0
130 DRAW 0,-20
135 REM DRAW ZENER DIODE
140 DRAW -5,0
150 DRAW -3,3
155 REM plot is 142,60 for zene
r
160 PLOT 142,60
170 DRAW 5,0
180 DRAW 3,-3
190 PLOT 142,60
200 DRAW -3,-3
210 DRAW 6,0
220 DRAW -3,3
230 PLOT 142,60-4
240 DRAW 0,-20
245 REM DRAW GROUND SYMBOL
250 PLOT 142-6,36
260 DRAW 12,0
270 PLOT 142-4,34
280 DRAW 8,0
290 PLOT 142-2,32
300 DRAW 4,0
310 PLOT 142,30
320 PLOT 142,80
330 DRAW 50,0
340 PLOT 192,80
350 CIRCLE 194,80,2
360 CIRCLE 42,80,2
370 CIRCLE 141,80,1
380 CIRCLE 142,80,1
400 PRINT AT 11,1;"DC"
405 PRINT AT 12,0;"INPUT"
410 PRINT AT 10,10;"R"
420 PRINT AT 15,11;"ZENER"
425 PRINT AT 16,11;"DIODE"
430 PRINT AT 11,25;"REG."
440 PRINT AT 12,25;"OUTPUT"

```

```

1000 REM program converted from
Circuit Design Programs For The
TRS-80
1010 REM by Dick Wagner 8/93
1020 REM for the 2068 computer
1050 CLS : PRINT "ZENER DIODE VO
LTAGE REGULATOR DESIGN"
1060 PRINT : PRINT "MINIMUM DC I
NPUT VOLTAGE ";: INPUT V1: PRINT
V1
1070 PRINT "MAXIMUM DC INPUT VOL
TAGE ";: INPUT V2: PRINT V2
1080 PRINT "MINIMUM LOAD CURRENT
(IN MA) ";: INPUT I1: PRINT I1

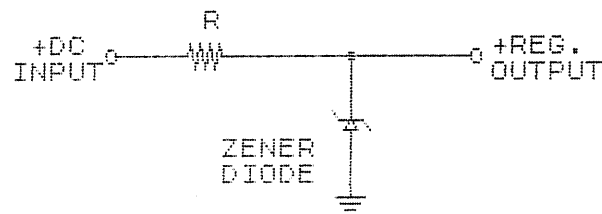
```

```

1090 PRINT "MAXIMUM LOAD CURRENT
(IN MA) ";: INPUT I2: PRINT I2
1095 REM convert MA to decimal
1100 LET I1=I1*1E-3: LET I2=I2*1
E-3
1110 PRINT "ZENER DIODE VOLTAGE
";: INPUT VZ: PRINT VZ
1120 LET R=(V1-VZ)/(1.1*I2)
1130 LET P=VZ*((V2-VZ)/R)-I1)
1135 REM integer values of R and
P
1140 LET R=INT (R*10+.5)/10: LET
P=INT (P*100+.5)/100
1150 PRINT : PRINT "THEN:"
1160 PRINT : PRINT "REQUIRED SER
IES RESISTANCE =";R;"OHMS"
1170 PRINT "MINIMUM ZENER DIODE
RATING =";P;"WATTS"
1190 LET Z=VZ*((V2-VZ)/R): LET Z
=INT (Z*100+.5)/100
1200 PRINT "MINIMUM ZENER DIODE
RATING WITH NO LOAD =";Z;"WATTS"
1205 PRINT "MINIMUM WATTS RATING
OF R ";: PRINT (V2-VZ)*I2
1210 PRINT "ANOTHER CALCULATION?
(Y OR N)";: INPUT A$: IF A$="Y"
THEN GO TO 1050: IF A$="N" THEN
STOP

```

ZENER DIODE VOLTAGE REGULATOR



RMG UPDATE NEWS FOR SEPTEMBER 1993

VOLUME 5 NUMBER 9-

We would like to hear from you! If you have something that you think we or our readers would be interested in hearing about, please call or write! We will pass it on!

** RMG NEWS **

By this time we are probably all busy outdoors or looking forward to the end of summer. No? Well, no matter what we are doing, chances are we will do some of it with the aid of our trusty computers. RMG is here to help if we are able to. We have seen a sudden upturn in the TS business during the last month. We can only hope that it continues so that we can continue to be here for you, our valued friends and customers.

Have you tried the RMG VOICEMAIL/FAX LINE yet? if not, you will have plenty of time as it will be a permanent thing. Our regular phone line at 503-655-7484 has always had an answering machine on it in case we were unable to answer in person. Now, with our Voicemail line, you have more options. You can be certain that what you say is what you wanted us to hear, as you can delete and start over if you make a mistake. You get to listen to what you record and add to it or delete it entirely. You are also assured that no one but authorized persons will hear it in case you use a bankcard to place an order, as the box is password protected. If you wish to send us a FAX, be assured that it will not be printed out and lost on the floor as our system stores them on the hard drive until we read them. That number again is: 503-655-4116 24 hours per day, 7 days per week, 365 days per year (barring power failures).

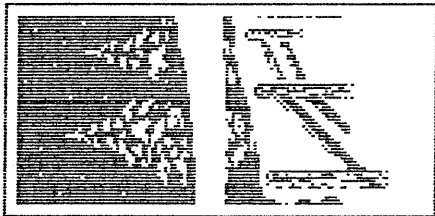
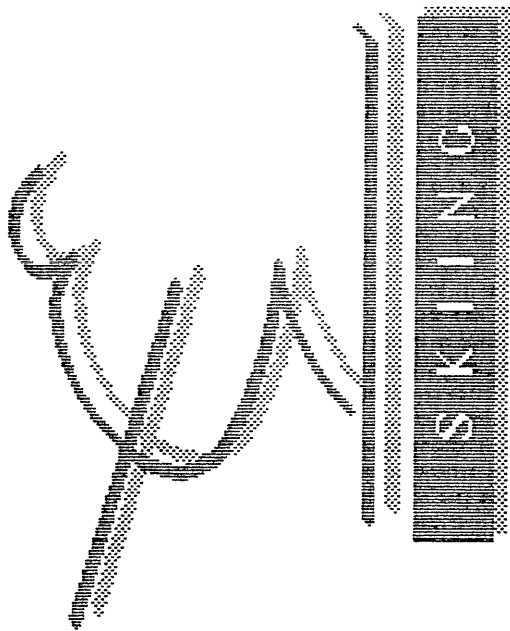
As some of you know by now, we finally received the version 5.0 upgrade of Bob Swoger's LOGICALL for LKDOS and it is super! We have shipped the copies that some of you had on order. Let us know what you think of it. If anyone else would like a copy of the upgrade, just send your original disk with \$5 to cover costs to us and we will send you a new copy. Please specify disk format (5.25"/3.5"-DSDD/SSDD) If you want to keep a copy of the old version, please do so as we will be putting the new version on your old disk(s).

We are still plugging away on THE BEST OF THE PLOTTER so don't give up on it yet! We have fewer and fewer people working on it now. With one of our group having to have heart surgery, we are down to 2 of us working on the project. We are in the final stages of the paste-up process and the covers/separator pages are done. The final steps will be to number the pages, create and index/table of contents and possibly, a glossary/index.

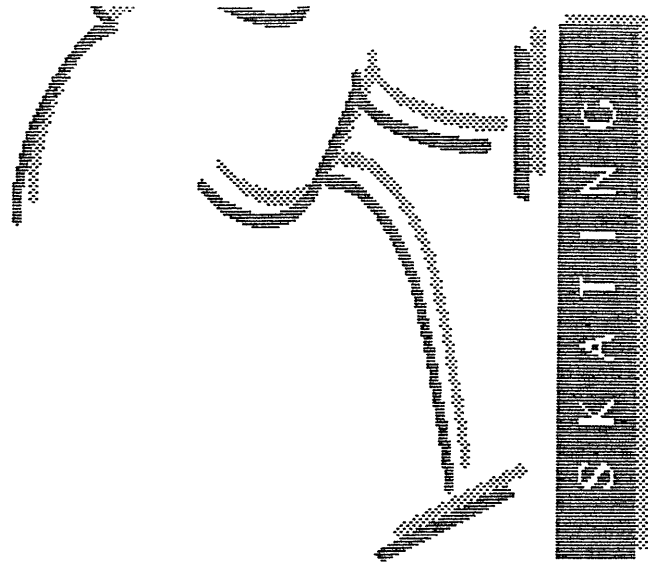
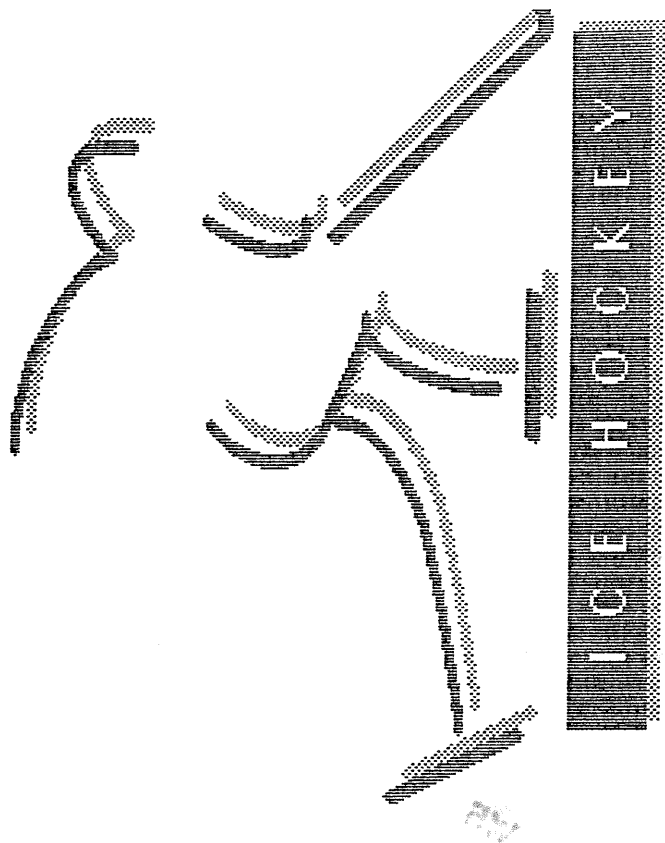
Our thanks again to all of you loyal customers and TS fans who have been so patient during our recent move. We think we are pretty current with our mail and orders. If you have been waiting for more than 60 days, PLEASE! Let us know so we can correct the problem.

KEEP WATCHIN' FOR MORE NEWS!

Rod Gowen, Owner, RMG Enterprises
14784 South Quail Grove Circle, Oregon City, OR 97045
503/655-7484 8AM-6PM PT * FAX/VOICEMAIL: 503/655-4116 24 HRS



1993



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